

REMARKS

The present amendment is submitted in response to the Office Action dated March 21, 2008, which set a three-month period for response. Filed herewith is a Request for a Three-month Extension of Time, making this amendment due by September 21, 2008.

Claims 16-24 are pending in this application.

In the Office Action, the specification was objected to for various informalities. Claims 1-15 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,124,550 to Funken et al. Claims 3, 4, and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Funken et al in view of U.S. Patent No. 963,035 to Cope. Claims 5-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Funken et al in view of U.S. Patent No. 5,767,449 to Gronowicz, Jr. Claims 1 and 10-15 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7, 9, 10 and 21 of copending Application No. 10/593,594 in view of Funken et al.

In the present amendment, the specification has been amended to add standard headings and to delete reference to the claims.

Claims 1-15 have been canceled and new claims 16-24 have been added, which address the formal rejections as well as the substantive rejections raised in the Office Action.

New claim 16 is directed to a sleeve 11 having nominal contact-points (bulges or beads according to claim 17) which ensure a good electrical contact between the sleeve 11 and the sheath 21 of the winding. The Examiner is directed to the specification at page 5, line 1 through page 6, line 21 and particularly to page 5, third paragraph and page 6, lines 3 to 13. Further, at page 7, third paragraph (and in particular lines 21 - 23) the advantages of the present invention are disclosed particularly for the case that the contact points 18 are pressed into the sheath 21 of the winding in the mounted condition thereof. The disadvantages of the state of the art and the advantages resulting from the invention are also disclosed at page 2, first and fifth paragraph.

The nominal contact-points 18 ensure safe, large-area transitions for the electric current between the sheath 21 and the sleeve 11 instead of accidentally formed, point-like contact points.

In Section 6 of the Office Action the Examiner cites only Gronowicz against former claims 5 - 8 directed to the nominal contact-points, arguing that Gronowicz discloses a device comprising a sleeve with nominal contact points comprising a bead (24, 124) wherein the bead has such a radial height that it presses itself into the sheath. The Applicants respectfully disagree.

The Gronowicz device is based on another principle than that of the present invention. As is described at column 3, lines 17 – 20, for example, of this reference, the outer surface of the inner sleeve 18 is provided with a shallow, circumferential groove 20. Further, the outer sleeve of grounding

collar 10 has the purpose of clamping the shielding tube 12 between the two sleeves. According to column 4, lines 1 and 2, the ring 24 projects into engagement with groove 20 when the inner sleeve is properly positioned in the outer sleeve. The dimensions of the ring 24 and groove 20 are made such that the tube 12 if firmly pressed into contact with the ring 24 in order to ensure a good electrical contact.

Further, according to column 3, lines 12, 13 the inner and outer sleeve is made from a plastic (i.e. a material which is non-conductive), and the electrically conductive ring 24 is inserted into outer sleeve by means of molding.

The Applicants believe that in order to evaluate the Gronowicz reference and the present invention, it is at first necessary to compare the expressions used in the citation and in the specification.

Gronowicz teaches clamping clamp an electric conductive tube 12 (= sheath 21 in the present specification and claims) between two cylindrical sleeves 16 and 18 encircling the winding on the whole circumference (comparable with sleeve 11 of the invention). Both sleeves 16, 18 are electrically non-conductive but made from plastics. The electric contact between tube 12 and a grounding wire (not shown) is made by means of a grounding terminal 26 having a ring 24 at its inner end, said ring 24 being disposed at the whole inner surface of the outer sleeve 16 (see column 3, lines 24 - 27 and column 4, lines 5 - 6). Terminal 26 and ring 24 obviously are additional parts being connected to outer sleeve 16 by molding. Terminal

26 corresponds to connecting element 16 of the invention. Further, the outer surface of the inner sleeve 18 is provided with a circumferential groove 20 for cooperation with ring 24 of the terminal 26 (column 3, lines 17 -19 and column 4, first paragraph).

In contrast, according to the present application, sheath 21 of winding 4 is not clamped between two sleeves, but simply inserted into an open end of an elastically resilient sleeve 11 which only partly encloses (wraps around) winding 4. This measure is highly desired in order to easily connect sheath 21 to ground at a great plurality of locations (e. g. at every provided groove of the long-stator). It is then not necessary to slide an inner sleeve in the interior of sheath 21 as described at column 4, lines 10-16 of Gronowicz.

Further, the sleeve 11 according to the present invention obviously is a one-piece element, is wholly made of an electrically conductive material and has at least one end an electrically conductive connecting element 16 for being connected with ground conductor 17 (Fig. 6 of the present application). Furthermore, sleeve 11 (and not a conductive terminal or connecting element 26 as proposed by Gronowicz) is provided at its inner side with a bulging contact-point 18 forming a contact-area 18a being pressed into sheath 21 of winding 4 as shown in Fig. 8 of the invention (and not only pressed against tube 12 for clamping the latter between ring 24 and sleeve 18 according to Gronowicz).

The sleeve 18 of Gronowicz must be provided with the circumferential groove 20 whereas the invention has no need for such a groove. Finally,

Gronowicz does not even provide a suggestion with respect to the elasticity of the winding or at least of tube 12 being made from fibers (column 3, lines 1 - 3) and, therefore, is most probably substantially inelastic. It can be deduced that ring 24 is not pressed *into* tube 12 but tube 12 is, as disclosed in the U.S. patent, laid into groove 20 and then clamped between the walls of groove 20 and the outer surface of ring 24.

It follows from the above that when the Gronowicz device is used, electric current flows from tube 12 to ring 24 and then through terminal 26 to the ground conductor. Ring 24 has a substantial outer surface in circumferential direction such that it cannot be ensured that, as mentioned at page 2, fifth paragraph of present specification, current flows continuously through the whole ring 24 instead of also through accidentally formed, very small contact spots. This is particular true because of the usually provided tolerances for ring 24 and sleeves 16, 18 when tube 12 is merely clamped between ring 24 and sleeve 18.

In contrast, the invention has no such ring but merely comparatively small beads forming well defined contact areas 18a pressing into sheath 21 (Fig. 8) and ensuring thereby that electric current flows from such contact-areas 18a through the sleeve body and from there to the connecting element 16.

In addition to the above distinctions, Gronowicz teaches that no pressure is applied to cable 14 (column 4, lines 8 and 9). In contrast, the present invention teaches applying pressure to winding 4 as a result of pressing the beads into sheath 21.

Because of the differences mentioned above between Gronowicz and the present invention, the following expressions of Gronowicz and the invention must be compared. In the present invention, the sleeve 11 is electrically conductive, while in Gronowicz, the sleeves 16, 18 are non-conductive. In the present invention, the sheath 21 is elastic, while in the reference, the tube 12 is substantially non-elastic. In the present invention, the connecting element 16 is part of sleeve 11; in the reference, the connecting element 26 with the ring 24 is an additional part. The present invention has defined nominal contact-areas for pressing into the sleeve, sheath 21 which are part of sleeve 11. In Gronowicz, undefined circumferential contact-ring 24 is provided for clamping tube 12 between the ring 24 and is an additional part connected to the sleeve 18 with no nominal contact-areas. Finally, the ground conductor is connected to the connecting element 16 and sleeve 11 in the present invention; in the reference, the ground conductor is connected to the terminal 26 and ring 24.

New independent claim 16 therefore is not anticipated by Gronowicz based on the above differences.

However, in Section 6 of the Office Action, the Examiner argues that former claims 5-8 are rejected as unpatentable over Funken et al in view of Gronowicz. This is not true with regard to new claim 16. It would not be obvious to use ring 24 of Gronowicz in the device of Funken. Even if this would be done, a combination of Funken et al and Gronowicz would not lead to the invention. A transfer of the Gronowicz teaching would mean that a)

sleeve 13 of Funken et al is made from plastics instead of metal; b) sleeve 13 of Funken et al is provided at an inner surface with the electrically conductive ring 24 of Gronowicz; and c) that a separate terminal (26 in the Gronowicz patent) is passed through sleeve 13 of Funken et al in order to make contact with ring 24. As a result thereof, the sleeve 13 itself of Funken et al would not be provided with a defined nominal contact-point and electric current would not flow from a contact-point through sleeve 13 to a connecting element being a part of sleeve 13.

In other words, the sleeve according to new claim 16 has no ring 24 and no terminal 26 in the sense of Gronowicz and particularly no circumferential groove 20 at an inner side.

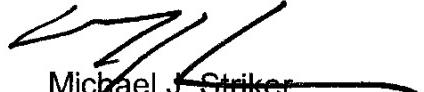
A combination of Funken et al and Gronowicz does not lead to the invention. Furthermore, Gronowicz could not make obvious, as the Examiner argues, providing individual beads at the outer edges and the longitudinal ends of sleeve 13 of Funken et al instead of using a circumferential ring 24 in a mid-portion of the sleeve for the purpose of clamping. Further, even if Gronowicz improves the electrical contact between the sleeve and the sheath, the provision of individual, comparatively small contact-areas 18a pressing into the sheath material is a much better means to solve the problem addressed by the present invention, namely, to avoid accidentally formed point-like contact points between the sheath and the ring, compared with a ring 24 having a large area and only abutting sheath 21 (= tube 11) instead of being pressed into it.

New claim 16 is therefore patentable over the cited references, as are its new dependent claims 17 through 24.

For the reasons set forth above, the Applicants respectfully submit that new claims 16-24 are patentable over the cited art. The Applicants further request withdrawal of the rejections and reconsideration of the claims as herein amended.

Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,



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